

ZEMPER

THE EMERGENCY LIGHTING SPECIALIST

Lighting in ATEX Zones



ClassNK



SATURNO



ZEMPER

THE EMERGENCY LIGHTING SPECIALIST

The Zemper range of luminaires is designed, manufactured and distributed by Zemper, a subsidiary of the FW Thorpe Plc group. FW Thorpe is listed on the London Stock Exchange. See the corporate website at: www.fwthorpe.co.uk

Other Companies within FW Thorpe Group





Zemper in the world

Spain

Ciudad Real: Headquarters.
Barcelona: Showroom and facilities.
Madrid: Showroom and facilities.

Zemper France

Zemper BeLux
Zemper UK

Commercial branches:

Morocco and Colombia.



Over the last 50 years, the company has focused on high technology products and lighting control systems.

Huge investment in design and testing facilities in Ciudad Real (Spain) has now put **Zemper** at the forefront of its market sector.

When choosing **Zemper** you can be confident of receiving:

- Professional, competent advice from a long-established Spanish company.
- Excellent customer service and a 6-year warranty including batteries.



Designers, manufacturers and suppliers of professional emergency lighting system since 1967



Production plant

Zemper owns the complete production cycle for emergency luminaires.

The company's continuous investments in new machinery have increased capacity and modernised the manufacturing process (laser marking, pcb functional test, etc.).

Zemper's luminaires and systems are designed and engineered for reliability and governed by rigorous quality assurance processes at every stage in the development and production cycle.

Factory: 10,000 m²

Production Plant: 6,000 m²

Luminaire capacity: 2.5 million units/year



VISIT OUR FACTORY





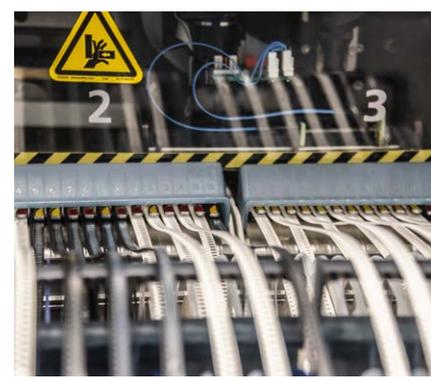
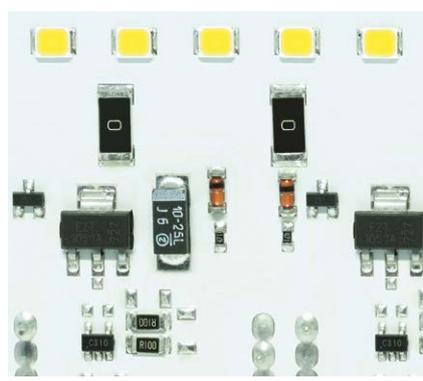
SMD Room

Zemper is able to exploit recent advances in LED technology to help meet customer demand for energy-efficient solutions.

Almost all LED products benefit from bespoke

LED printed circuit boards (PCBs) designed by the Zemper technical team. These PCBs ensure that Zemper emergency luminaires deliver maximum performance.

3,000,000
components
placed per
week





R&D department

10 Engineers (10% of the staff)

Mechanical development (3D designs and Mould management)

Full electronic component design

Systems (Software and Communications)

Lighting designs for projects





Own laboratories

We research and test internally without limits.

Guaranteed products with full quality and confidence.

Dust tightness chamber, impact hammer, climatic chamber, glow wire machine, EMC tester, battery duration testers, 2 Ulbricht spheres, etc.



COMPANY CERTIFICATIONS



Zemper ISO 9001:2015 Certification

ISO 9001:2015 specifies the criteria for a company-wide quality management system. Using ISO 9001:2015 helps Zemper ensure that its customers get consistently good quality products and services.



Zemper ISO 14001:2015 Certification

ISO 14001:2015 sets out the criteria for an effective environmental management system. Being certified to ISO 14001:2015 assures customers that Zemper measures and reduces its environmental impacts and complies with environmental legislation.



Zemper ISO 45001:2018 Certification

ISO 45001:2018 is an International Standard that specifies requirements for an occupational health and safety (OH&S) management system, with guidance for its use, to enable an organisation to proactively improve its OH&S performance in preventing injury and ill-health.



Zemper IQNet SR10 Certification

IQNet SR10: is an international management and improvement standard that gathers the best international practices and recommendations regarding social responsibility, such as those established in ISO 26000. In an increasingly competitive and globalised world, organisations are becoming more and more aware of their active role in generating wealth, employment, quality products and services, as well as other benefits for their shareholders, customers, employees, suppliers and other stakeholder groups which they work with.

ISO 9001:2015

ISO 14001:2015

ISO 45001:2018

IQNet SR10



PRODUCT CERTIFICATIONS



COLOMBIA



CNIM



CIVIL DEFENSE



KITEMARK



DECLARATIONS OF CONFORMITY

Zemper products are manufactured to the most stringent quality control standards in the most environmentally friendly manner. Declarations of Conformity are available stating that Zemper luminaires have been tested to and comply with the relevant international standards for the manufacture and testing of luminaires and related products.

Each declaration also confirms that products are manufactured to an approved ISO 9001 quality system, and that products are fully tested before despatch. Tests include those for safety earth circuit continuity, full circuit functionality including dimming, and current drawn. Specialist in-house protection circuitry is employed to prevent damage to equipment under test conditions.





The Zemper Way to a Better World

INVESTING FOR THE FUTURE

Given that we already apply circular economy techniques when designing and manufacturing our new products as part of Zemper's commitment to sustainability, it's vital that we have full control over the GHGs (Greenhouse gases) both directly and indirectly generated by our work. That's why Zemper has set itself the goal of studying its carbon footprint and having the resulting measurements certified by an accredited external body, aiming to keep improving at all times and to achieve the "Carbon Neutral" goal set by the Group.

Zemper has already made significant progress in terms of sustainability. The expansion in our certifications, together with the sustainability actions carried out to date, has resulted in recognition by Ecovadis who have awarded us their silver medal as a result of our latest assessment.



6 Year Warranty: A genuine warranty with genuine value

INCLUDING BATTERIES



Zemper is proud that **100% of its products** are designed and manufactured in **Spain, European Union**.

By manufacturing in the EU, Zemper can meet urgent customer demands without the need to transport products from other continents, which would involve additional financial and environmental costs.



FOCUS ON PROJECTS

Spain



Real Madrid Football Stadium (Madrid)



Supercomputing Centre (Barcelona)



San Pablo Airport (Sevilla)



Bonanova Tunnel (Barcelona)

Portugal



Lisbon Metro (Lisbon)



Terceira Island Hospital (Azores)

Morocco



Mohammed V Passenger Terminal (Casablanca)



City Centre Mall (Tanger)



Hilton Houara Hotel (Tanger)



Arribat Shopping Centre (Rabat)

Algeria



Houari Boumediene International Airport (Algiers)

Colombia



EPM Smart Building (Medellin)

Djibouti



Ambouli International Airport (Djibouti City)

Cote d'Ivoire



Postel Tower (Abidjan)



Exhibition Centre (Abidjan)



ZEMPER

Working together on projects
all over the world

We are present in 5 continents and 30 countries.

We have more than 50 years of experience behind us which enables us to offer competitive solutions that we bring to every project we undertake. Our customers rely on our know-how and this trust is one of our greatest strengths.

France



Le Balthazar Building
(Saint Denis)



X Renault Building
(Billancourt)

Norway



Rortunet (Oslo)

Austria



Brandbox (Salzburg)

Belgium



ZNA Hospital (Antwerp)



Brussels Airport (Brussels)



De Persgroep HQ of Belgium most
Important Multi-Media Company
(Antwerp)



New Town Hall
(Hasselt)



Radisson Blu Hotel
(Bruges)



Offices in a culture hall
Tour & Taxi (Brussels)



Technical School
(Antwerp)



HQ Bankcompagny BNP
(Brussels)



Red Devils Football
Training Center (Tubeke)

Explosion Proof Fittings ATEX



ClassNK







WORLD STANDARDS



IECEx (International Scheme)

The IECEx scheme is an international certificate of conformance for products used in a hazardous area.

This scheme provides:

- A single certification of conformity for manufacturers to comply that includes:
 - Testing and assessment of products to a standard including a full test report.
 - Ongoing surveillance of manufacturers premises.
- A fast-track process for countries where regulations still require the issuing of national Ex certificates or approvals.

ClassNK

Class NK works to ensure maritime safety and protect the marine environment.

It provides classification and technical services to roughly 20% of the world's commercial fleet.



The ATEX European Directives 94/9/EC

ATEX requires employers to eliminate or control risks from dangerous substances and to classify areas where explosive atmospheres may occur into zones, as laid down in regulations. ATEX Directives are designed to protect employees, the public and the environment from accidents owing to explosive atmospheres and since July 1st 2006 all existing sites, as well as new sites, must be fully ATEX compliant.

The ATEX directive 2014/34/EU applies to end users. These directives compliment each other, but have different purposes. ATEX100A covers both electrical and non-electrical products intended for use in hazardous areas, including mechanical equipment.

Any product sold within the European Union designed for use in explosive atmospheres must be ATEX certified and bear the ATEX marking in conjunction with CE marking. The objective is to facilitate the movement of goods within the EU.



APPLICATION AREAS
EQUIPMENT CATEGORIES
EQUIPMENT PROTECTION LEVEL

The following chart shows the designated areas of use of equipment and components according to equipment group and equipment category/equipment protection level.

HAZARDOUS AREA

Conditions and subdivisions			Required marking on the usable equipment			
Flammable materials	Temporary behaviour of explosive atmosphere	Classification of hazardous areas	Equipment group as defined in directive 2014/34/EC	Equipment category as defined in directive 2014/34/EC	Equipment group as defined in IEC/EN 60079-0	Equipment protection level (EPL) as defined in IEC/EN 60079-0
Gases Vapours	Is present continuously or for long periods or frequently	Zone 0	II	1G	II	Ga
	Arises in normal operation occasionally	Zone 1	II	2G or 1G	II	Gb or Ga
	Is not likely to arise in normal operation, or if it does, will persist for a short time only	Zone 2	II	3G or 2G or 1G	II	Gc or Gb or Ga
Dusts	Is present in the form of a cloud continuously, or for long periods or frequently	Zone 20	II	1D	III	Da
	Occasionally develops into a cloud during normal operation	Zone 21	II	2D or 1D	III	Db or Da
	Is not likely to develop into a cloud during normal operation, or if it does, for a short time only	Zone 22	II	3D or 2D or 1D	III	Dc or Db or Da
Methane Carbon dust	Operation where there is a risk of explosion	-	II	M1	I	Ma
	Disconnection where there is a risk of explosion	-	I	M2 or M1	I	Mb or Ma



EMERGENCY LIGHTING - GENERAL DATA

- Led driver with AutoTest function as per IEC32034
- High temperature LiFePO4 cells
- 20 hours charging to obtain the nominal duration
- Electronic multi-level charge system
- Deep discharge protection
- Switch ON / OFF connection is available for maintained luminaires.
- Status indication bi-colour LED: Green Ok - Red: Fault

Testing

- Commissioning test is carried out automatically after permanent connection of the supply for 5 days.
- Functional test is carried out for 5 seconds on a weekly basis.
- Duration test is carried out yearly to check the capacity of the batteries



SATURNO EXPLOSIONPROOF FEATURES

Approvals and Certifications

- Zone 1/2 / Zone 21/22
- Ex db IIC T6 Gb
- Ex tb IIIC T85 °C Db
- IK protection degree
PC E1, E2, E3 :IK10
Glass E1, E2: IK07 / E3: IK09
- IP66
- Class: I

Technical information

- Electronic driver: 220 - 240 V 50/60 Hz
- Power factor: 0.95
- Set of LED modules with opal cover diffuser:
 - Color temperature 4000 °K (6500 °K under request)
 - CRI > 80

Operation temperature:

- Glass diffuser (E1, E2, E3):
- Lighting working temperature -20 °C to +55 °C
 - Emergency working temperature: 0 °C to +55 °C

Polycarbonate diffuser (E1, E2, E3):

- Lighting working temperature: -20 °C to +50 °C
- Emergency working temperature: 0 °C to +50 °C

Standards

- Approved to:**
- EN 60079-0: (General requirements)
 - EN 60079-1: (Flameproof enclosure "d")
 - EN 60079-31: (Enclosure "t")

- EC Type examination:** · Directive: 2014/34/EU

- Certificated:** · Notified Body: INERIS n°0080

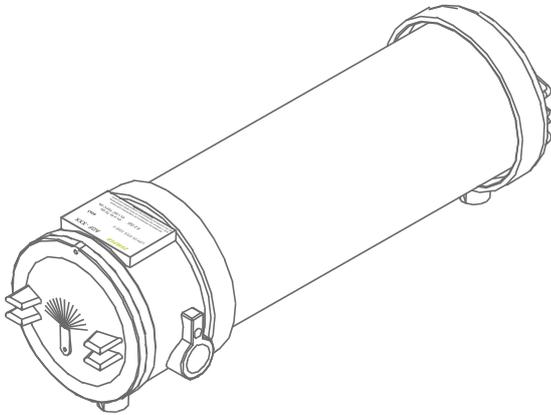
Enclosure general data

- Tubular diffuser:**
- Borosilicate glass, E1: 7 mm E2/ E3 9 mm
 - Polycarbonate, UV protected. 3 mm thick

Casting & connections:

- Die casting Marine Grade Aluminium (LM6)
- Yellow RAL-1003 / Ultramarine Blue RAL - 5002 polyurethane paint
- Explosion proof O-ring
- 2 entries 3/4" NPT for cable glands (not included)
- 1 ATEX plug supplied
- Electric connection through 5P+T 2.5 mm² terminal block
- Suitable for installation on flammable surfaces

MARKING EXAMPLE IN ACCORDANCE WITH DIRECTIVE 2014/34/EU, EN AND IEC STANDARDS (IEC/EN 60079-0 ET SEQ.)



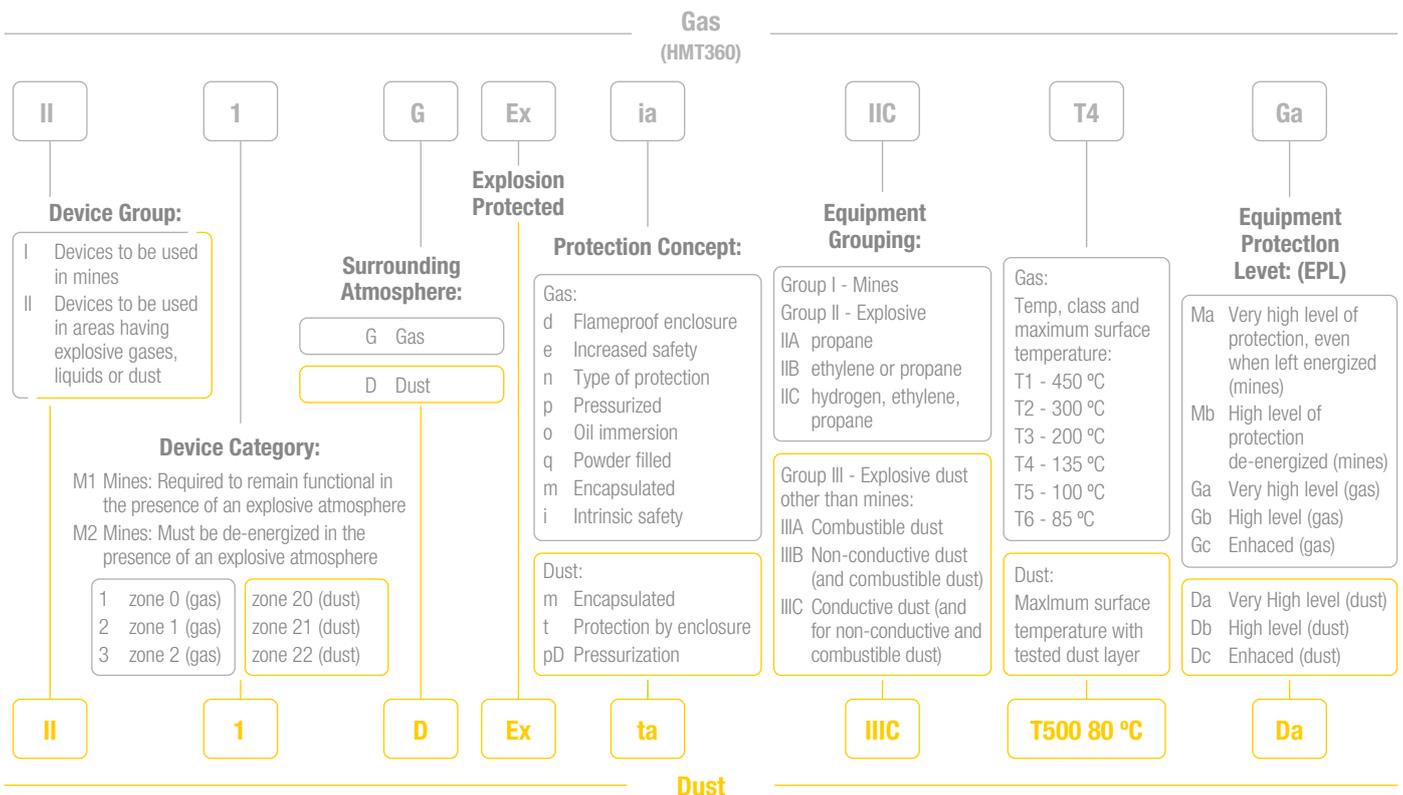
INFORMATION SPECIFIC TO EXPLOSION PROTECTION (MARKING)

ATEX directive/EN standards

- | | |
|---|---|
| 1 Conformity mark (CE) | 5 Equipment group II - other areas (non-mining)
Equipment category 2 - gases/vapours G,
suitable for Zones 1 and 2 - dusts D,
suitable for Zones 21 and 22 |
| 2 Identification number of the notified body which
-where required- certified the QA system or examined
the products (Category 1 and 2) | 6 Certificate of conformity (*) |
| 3 Ex mark | 7 IP Protection degree
TEMP: Temperature Range |
| 4 EC-type examination certification | |

IEC standards

* Certificate of Conformity





SATURNO



Ex db IIC T6 Gb
Ex tb IIIC T85°C Db

IP66 IK07 - IK10

SPECIFICATION

Wall	Surface	✓
	Recessed	x
Ceiling	Surface	✓
	Recessed	x

Envelope:
Die casting Marine Grade Aluminium (LM6)

Diffuser: Borosilicate glass / Polycarbonate

IP66

IK protection degree

- PC E1, E2, E3: IK10
- Glass E1, E2: IK07 / E3: IK09

Lm Lighting Luminous range: 1 250 lm - 11 000 lm
Emergency Luminous range: 350 lm - 800 lm

Duration: 3 h · Battery: LiFePO₄

Charging time: 20 h

Supply: 220 - 240 V 50/60 Hz

LED temperature: 4000 °K (6500 °K under request)

Glass diffuser:

- Lighting working temperature -20 °C to +55 °C
- Emergency working temperature: 0 °C to +55 °C

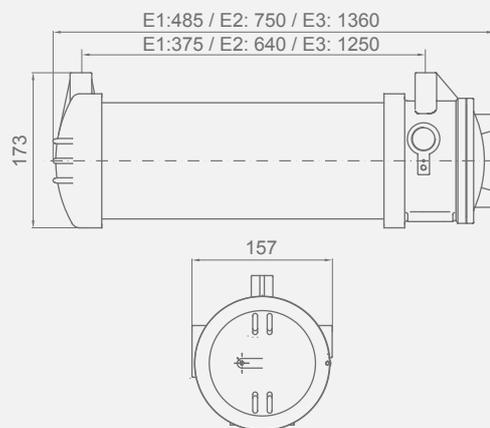
Polycarbonate diffuser:

- Lighting working temperature: -20 °C to +50 °C
- Emergency working temperature: 0 °C to +50 °C

AutoTest



DIMENSIONS (mm)



STANDARDS COMPLIANCE

EN-60598-2-22
AutoTest: EN-62034
Dali: EN 62386

CERTIFICATIONS



ClassNK



IP

IK

Lm



LED



RANGE

LIGHTING

Dimensions	Polycarbonate Enclosure	Lighting	Glass Enclosure	Lighting	Communication
E1	LSIPC1100	1 250 lm	LSVC1100	1 300 lm	
E1	LSIPC1200	2 150 lm	LSVC1200	2 500 lm	
E2	LSIPC2200	2 500 lm	LSVC2200	2 650 lm	
E2	LSIPC2200A	2 500 lm	LSVC2200A	2 650 lm	DALI
E2	LSIPC2200AK	2 500 lm	LSVC2200AK	2 650 lm	DALI
E2	LSIPC2400	4 750 lm	LSVC2400	5 000 lm	
E3	LSIPC3400	4 750 lm	LSVC3400	5 000 lm	
E3	LSIPC3400A	4 750 lm	LSVC3400A	5 000 lm	DALI
E3	LSIPC3400AK	4 750 lm	LSVC3400AK	5 000 lm	DALI
E3	LSIPC3110	11 000 lm	LSVC3110	11 750 lm	
E3	LSIPC3110A	11 000 lm	LSVC3110A	11 750 lm	DALI

EMERGENCY - Polycarbonate Enclosure

Dimensions	Type*	Enclosure	Emergency	Lighting	Battery	Duration	Communication
E1	NM	LSPC1400LX3	350 lm		3.2V / 3Ah LiFePO ₄	3h	
E1	NM	LSPC1700LX3	750 lm		3.2V / 9Ah LiFePO ₄	3h	
E2	NM	LSPC2700LX3	750 lm		3.2V / 9Ah LiFePO ₄	3h	
E2	M/NM	LSPC2700LXP3	800 lm	4 800 lm	3.2V / 9Ah LiFePO ₄	3h	
E2	M/NM	LSPC2700LAP3	800 lm	4 800 lm	3.2V / 9Ah LiFePO ₄	3h	DALI
E3	M/NM	LSPC3700LAP3	800 lm	4 800 lm	3.2V / 9Ah LiFePO ₄	3h	DALI
E3	M/NM	LSPC3700LXP3	800 lm	4 800 lm	3.2V / 9Ah LiFePO ₄	3h	

EMERGENCY - Glass Enclosure

Dimensions	Type*	Enclosure	Emergency	Lighting	Battery	Duration	Communication
E1	NM	LSVC1400LX3	400 lm		3.2V / 3Ah LiFePO ₄	3h	
E1	NM	LSVC1700LX3	800 lm		3.2V / 9Ah LiFePO ₄	3h	
E2	NM	LSVC2700LX3	800 lm		3.2V / 9Ah LiFePO ₄	3h	
E2	M/NM	LSVC2700LXP3	850 lm	5 000 lm	3.2V / 9Ah LiFePO ₄	3h	
E2	M/NM	LSVC2700LAP3	850 lm	5 000 lm	3.2V / 9Ah LiFePO ₄	3h	DALI
E3	M/NM	LSVC3700LAP3	850 lm	5 000 lm	3.2V / 9Ah LiFePO ₄	3h	DALI
E3	M/NM	LSVC3700LXP3	850 lm	5 000 lm	3.2V / 9Ah LiFePO ₄	3h	

*NM: Non Maintained. The luminaire operates from emergency supply only upon failure of the normal mains supply.

*M/NM: Maintained/Non Maintained. With a third terminal which allows to switch off/on the Maintained mode when connected to mains supply.

SPACING TABLE

EMERGENCY (Polycarbonate Enclosure)

LSPC1700X3 = 750 lm

Mounting Height	0.5 lux				1 lux			
	↔↔↔	↔↔↔	↔↔↔	↔↔↔	↔↔↔	↔↔↔	↔↔↔	↔↔↔
2.0 m	5.14 m	12.79 m	9.92 m	4.05 m	5.14 m	12.79 m	9.92 m	4.05 m
2.5 m	6.43 m	16.00 m	12.37 m	5.05 m	5.98 m	14.95 m	11.56 m	4.77 m
3.0 m	7.72 m	19.20 m	14.84 m	6.06 m	6.35 m	16.00 m	12.47 m	5.18 m
3.5 m	8.38 m	20.98 m	16.29 m	6.71 m	6.65 m	16.88 m	13.43 m	5.52 m
4.0 m	8.76 m	22.07 m	17.14 m	7.13 m	6.90 m	17.64 m	14.27 m	5.80 m
4.5 m	9.09 m	23.01 m	18.16 m	7.50 m	7.10 m	18.30 m	15.02 m	6.00 m

EMERGENCY (Glass Enclosure)

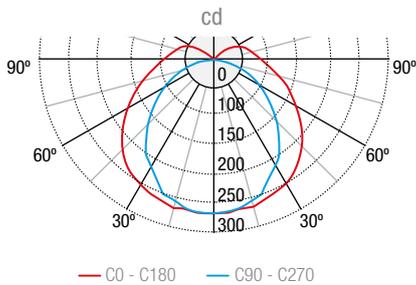
LSVC1700X3 = 800 lm

Mounting Height	0.5 lux				1 lux			
	↔↔↔	↔↔↔	↔↔↔	↔↔↔	↔↔↔	↔↔↔	↔↔↔	↔↔↔
2.0 m	4.71 m	11.85 m	9.65 m	4.06 m	4.71 m	11.85 m	9.65 m	4.06 m
2.5 m	5.87 m	14.78 m	12.01 m	5.05 m	5.87 m	14.78 m	12.01 m	5.05 m
3.0 m	7.05 m	17.74 m	14.42 m	6.06 m	6.25 m	15.76 m	13.18 m	5.51 m
3.5 m	8.22 m	20.70 m	16.82 m	7.07 m	6.60 m	16.59 m	14.23 m	5.89 m
4.0 m	8.65 m	21.79 m	18.11 m	7.59 m	6.91 m	17.30 m	15.18 m	6.18 m
4.5 m	9.03 m	22.70 m	19.19 m	8.00 m	7.19 m	18.06 m	16.03 m	6.43 m

PHOTOMETRIC GUIDE

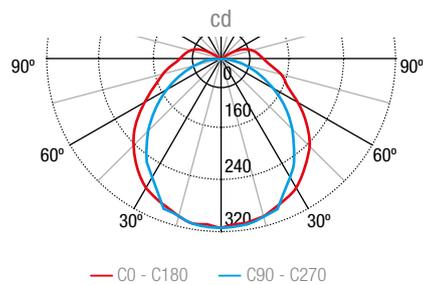
Polycarbonate Enclosure

LSPC1700X3 = 750 lm



Glass Enclosure

LSVC1700X3 = 800 lm



For further photometric data or spacing tables, please contact us.

ACCESSORIES *



CAM001
Ringbolt for
suspended mounting



BRD001
Flange for surface
ceiling mounting



APS600
(under request)



PSA001
Cable gland

(*) not included with the luminaires





Entirely designed and
manufactured in **Spain**



The Zemper Way to a Better World

We use recycled paper in the production of our catalogues, thus contributing to the conservation of forests and biodiversity. This paper requires up to 50% less energy and 90% less water, which significantly reduces environmental impact, reduces carbon dioxide emissions and promotes the circular economy. The ink we use is free of mineral oils, cobalt salts and VOCs (volatile organic compounds) so we contribute to limiting the environmental impact. We make more sustainable decisions and help protect our Planet.

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ZEMPER

THE EMERGENCY LIGHTING SPECIALIST

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See the corporate website at: www.fwthorpe.co.uk

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